

WHAT IS CLAIMED IS:

1. Isolated CHF excluding rat CHF.
2. The CHF of claim 1 that has a molecular weight on reducing SDS-PAGE of about 21-23 kD.
3. The CHF of claim 1 sharing at least 75% sequence identity with the translated CHF sequence shown in Fig. 1.
4. The CHF of claim 1 sharing at least 75% sequence identity with the translated CHF sequence shown in Fig. 1.
5. The CHF of claim 1 that is mature human CHF having the translated CHF sequence shown in Fig. 5.
6. An isolated antibody that is capable of binding the CHF of claim 1.
7. A hybridoma cell line producing the antibody of claim 6.
8. A method for detecting CHF comprising contacting the antibody of claim 6 with a sample or cell suspected of containing CHF and detecting if binding has occurred.
9. A method for purifying CHF comprising passing a mixture of CHF over a column to which is bound the antibody of claim 6 and recovering the fraction containing CHF.
10. An isolated nucleic acid molecule encoding the CHF of claim 1.
11. An isolated nucleic acid molecule comprising the open reading frame nucleic acid sequence shown in Fig. 1.
12. An isolated nucleic acid molecule comprising the open reading frame nucleic acid sequence shown in Fig. 5.

13. An isolated nucleic acid molecule excluding rat CHF selected from the group consisting of:
  - (a) a cDNA clone comprising the nucleotide sequence of the coding region of the CHF gene shown in Figure 1;
  - (b) a DNA sequence capable of hybridizing under stringent conditions to a clone of (a); and
  - (c) a genetic variant of any of the DNA sequences of (a) and (b) which encodes a polypeptide possessing a biological property of a native CHF polypeptide.
14. An isolated nucleic acid molecule excluding rat CHF selected from the group consisting of:
  - (a) a cDNA clone comprising the nucleotide sequence of the coding region of the CHF gene shown in Figure 5;
  - (b) a DNA sequence capable of hybridizing under stringent conditions to a clone of (a); and
  - (c) a genetic variant of any of the DNA sequences of (a) and (b) which encodes a polypeptide possessing a biological property of a native CHF polypeptide.
15. An isolated DNA molecule having a sequence capable of hybridizing to the DNA sequence provided in Fig. 1 under moderately stringent conditions, wherein the DNA molecule encodes a biologically active CHF polypeptide, excluding rat CHF.
16. An isolated DNA molecule having a sequence capable of hybridizing to the DNA sequence provided in Fig. 5 under moderately stringent conditions, wherein the DNA molecule encodes a biologically active CHF polypeptide, excluding rat CHF.
17. The nucleic acid molecule of claim 10 further comprising a promoter operably linked to the nucleic acid molecule.

18. The nucleic acid molecule of claim 10 that is DNA and comprises the translated DNA sequence shown in Fig. 1.
19. The nucleic acid molecule of claim 10 that is DNA and comprises the translated DNA sequence shown in Fig. 5.
20. The nucleic acid molecule of claim 10 that is labeled.
21. A vector comprising the nucleic acid molecule of claim 10.
22. An expression vector comprising the nucleic acid molecule of claim 10 operably linked to control sequences recognized by a host cell transformed with the vector.
23. A host cell comprising the nucleic acid molecule of claim 10.
24. A method of using a nucleic acid molecule encoding CHF to effect production of CHF comprising culturing the host cell of claim 23.
25. The method of claim 24 wherein the CHF is recovered from the host cell.
26. The method of claim 24 wherein the CHF is recovered from the host cell culture medium.
27. The method of claim 24 wherein the host cell is transfected with an expression vector comprising a CHF nucleic acid molecule.
28. A method of determining the presence of a CHF nucleic acid molecule in a test sample comprising hybridizing the nucleic acid molecule of claim 10 to a test sample nucleic acid and determining the presence of CHF nucleic acid.

29. A method of amplifying a nucleic acid test sample comprising priming a nucleic acid polymerase chain reaction in the test sample with the nucleic acid molecule of claim 10.
30. A method for assaying a test sample for hypertrophic activity comprising:
- (a) plating 96-well plates with a suspension of myocytes at a cell density of about  $7.5 \times 10^4$  cells per mL in D-MEM/F-12 medium comprising insulin, transferrin, and aprotinin;
  - (b) culturing the cells;
  - (c) adding the test sample to the cultured cells;
  - (d) culturing the cells with the test sample; and
  - (e) measuring for hypertrophy.

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